



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/629,596

07/30/2003

Takahiro Shiozawa

Q76717

6215

23373

7590

11/28/2006

SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

TU, JULIA P

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,596

Applicant(s)

SHIOZAWA ET AL.

Examiner

Julia P. Tu

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-6 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1, 2, and 7 are objected to because of the following informalities:

The examiner suggests to change "these" in line 44 of claim 1 to "regenerated clock and data of parallel signals."

The examiner also suggests to define p in line 4 of claim 2.

In line 6 of claim 7, the examiner suggests to change "said them" to "said time information RTSs."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-3 and 7 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for transmitting data and time information residual time stamps (RTSs), does not reasonably provide enablement for as transmitting data and time information residual time stamps (RTSs) separated. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to transmit data and time information residual time stamps (RTSs) the invention commensurate in scope with these claims.

Claims 1 and 7 recites a serial digital signal transmission system comprising a residual time stamp (RTS) generator circuit for separating high definition television (HDTV) serial digital signals to be transmitted into parallel data and time information residual time stamps (RTSs) and transmitting data and time information residual time stamps (RTSs) as separated; however, as shown in figure 3, data and time information residual time stamps have been packed in the ATM cell before transmitting; eventually, data and RTS are transmitted as a packet not as separated as claimed in claims 1 and 7.

Claims 2-3 are rejected as incorporating the deficiencies of a claim 1 upon which they depend.

Allowable Subject Matter

5. Claims 4-6 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

(1) regarding claims 2 and 3:

The present invention comprises first frequency dividing means comprises a first frequency dividing circuit for dividing the network clock into a frequency of 1/32 and a first p-bit counter for counting clocks supplied from the first frequency dividing circuit and obtaining a signal of prescribed first frequency, the second frequency dividing means comprises a second frequency dividing circuit for dividing the network clock into a frequency of 1/32 and a second p-bit counter for counting clocks supplied from the

Art Unit: 2611

second frequency dividing circuit and obtaining a signal of the prescribed first frequency, the gate pulse generating means is an $M_{\text{sub}.q-2}^{\text{sup.}(p-1)}$ counter (where $M_{\text{sub}.q}$ is the largest integer that does not surpass the average count M of the clock resulting from frequency division by 32 of the network clock in N periods of the serial clock of HDTV serial digital signals) for counting the clock supplied from said second frequency dividing circuit and supplying said gate pulse, and the frequency multiplying means is a PLL circuit for multiplying the frequency of the output signal of said gate circuit to said N -multiplied frequency. The closest prior art, Kitagawa et al. and Lau et al disclose a similar system which include frequency dividing circuits, bit counters, and gate pulse generating means but fail to teach the dividing circuits which divide the network clock into a frequency of $1/32$ and gate pulse generating means is an $M_{\text{sub}.q-2}^{\text{sup.}(p-1)}$ counter (where $M_{\text{sub}.q}$ is the largest integer that does not surpass the average count M of the clock resulting from frequency division by 32 of the network clock in N periods of the serial clock of HDTV serial digital signals). The distinct features have been added to the dependent claims 2 and 3, therefore, rendering them allowable.

(2) regarding claim 4:

Kitagawa et al. and Lau et al further disclose ATM cell processing unit but fail to teach besides selecting 8 as the value of said N , multiplexes 180 bytes of said HDTV serial digital signals on four of said ATM cells to generate ATM cells on whose remainder of payload are multiplexed nine of said time information RTSs corresponding

Art Unit: 2611

to the 180 bytes of HDTV serial digital signals. The distinct features have been added to the independent claim 4, therefore, rendering them allowable.

(3) regarding claim 5:

Kitagawa et al. and Lau et al. also fail to teach the ATM cell processing unit, besides selecting 8 as the value of N, multiplexes 5500 bytes of said HDTV serial digital signals on 123 of ATM cells to generate ATM cells on whose remainder of payload are multiplexed 275 of time information RTSs corresponding to the 5500 bytes of HDTV serial digital signals. The distinct features have been added to the independent claim 5, therefore, rendering them allowable.

(4) regarding claim 6:

Kitagawa et al. and Lau et al. also fail to teach said ATM cell processing unit, besides selecting 15 as the value of N, multiplexes 375 bytes of HDTV serial digital signals on eight of ATM cells to generate ATM cells on whose remainder of payload and RTS area of Segmentation and Reassembly Protocol Data Unit (SAR-PDU) header are multiplexed 10 of said time information RTSs corresponding to the 375 bytes of HDTV serial digital signals. The distinct features have been added to the independent claim 6, therefore, rendering them allowable.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lauret (US 2002/0191645) discloses a clock recovery mechanism for an ATM receiver recovers a service clock transmitted over an ATM

Art Unit: 2611

network. Restivo (US 6,807,180) discloses a synchronous method for clock recovery for use with constant bit rate services over an ATM network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julia P. Tu whose telephone number is 571-270-1087.

The examiner can normally be reached on 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J.T.
11-21-2006

Khanhcong Tran 11/27/2006
KHANH TRAN
Primary Examiner